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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/744,099	01/16/2001	Rebecca E. Cahoon	BB 1159	3054

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EXAMINER
FRONDA, CHRISTIAN L

ART UNIT	PAPER NUMBER
1652	

DATE MAILED: 11/15/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/744,099	Cahoon et al.
Examiner	**Art Unit**
Christian L. Fronda	1652

-- ***The MAILING DATE of this communication appears on the cover sheet with the correspondence address*** --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☐ Claim(s) _____ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☒ Claims *1-12* are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s).
18) ☐ Interview Summary (PTO-413) Paper No(s).
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other

DETAILED ACTION

Election/Restriction

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in response to this action, to elect a single invention to which the claims must be restricted.

I. Claims 1-5, drawn to an isolated nucleic acid fragment encoding a 3-dehydroquinate synthase and a transformed host cell

II. Claim 6, drawn to a 3-dehydroquinate synthase polypeptide.

III. Claim 7, drawn to a method of altering the level of expression of a 3-dehydroquinate synthase in a host cell.

IV. Claim 8, drawn to a method of obtaining a nucleic acid fragment encoding a 3-dehydroquinate synthase by probing a cDNA or genomic library with DNA probes.

V. Claim 9, drawn to a method of obtaining a nucleic acid fragment encoding a 3-dehydroquinate synthase by synthesizing an oligonucleotide primer and amplifying a cDNA insert using PCR.

VI. Claim 10, drawn to a nucleic acid product encoding a 3-dehydroquinate synthase obtained by probing a cDNA or genomic library with DNA probes.

VII. Claim 11, drawn to a nucleic acid product encoding a 3-dehydroquinate synthase obtained by synthesizing an oligonucleotide primer and amplifying a cDNA insert using PCR.

VIII. Claim 12, drawn to a method for evaluating at least one compound for its ability to inhibit the activity of a 3-dehydroquinate synthase.

2. The inventions listed as Groups I-VIII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special

technical features for the following reasons:

The special technical feature is a 3-dehydroquinate synthase polypeptide comprising all or a "substantial portion" of the amino acid sequence set forth in SEQ ID NO: 2. However, Stover et al. (Accession P34002) teach a 3-dehydroquinate synthase polypeptide comprising a "substantial portion" of SEQ ID NO: 2 because 219 amino acid residues of the reference amino acid sequence taught by Stover et al. are identical to SEQ ID NO: 2, and more than 10 contiguous amino acid residues of the reference amino acid sequence taught by Stover et al. are identical to SEQ ID NO: 2(See Alignment No. 1).

Since Applicants have not contributed a special technical feature over the prior art, Groups I-VIII do not have a single general inventive concept and therefore lack unity of invention.

3. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

For Group I, the species are SEQ ID NOs: 1-8. If this Group is elected, Applicants must elect only one sequence for examination.

For Group II, the species are SEQ ID NOs: 2, 4, 6, and 8. If this Group is elected, Applicants must elect only one sequence for examination.

For Group III, the species are SEQ ID NOs: 2, 4, 6, and 8. If this Group is elected, Applicants must elect only one sequence for examination.

For Group IV, the species are SEQ ID NOs: 2, 4, 6, and 8. If this Group is elected, Applicants must elect only one sequence for examination.

For Group V, the species are SEQ ID NOs: 1, 3, 5, and 7. If this Group is elected, Applicants must elect only one sequence for examination.

For Group VI, the species are SEQ ID NOs: 2, 4, 6, and 8. If this Group is elected, Applicants must elect only one sequence for examination.

For Group VII, the species are SEQ ID NOs: 1, 3, 5, and 7. If this Group is elected, Applicants must elect only one sequence for examination.

The species listed above do not relate to a single general inventive concept under PCT

Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: (1) each of the amino acid sequences of SEQ ID NOs: 2, 4, 6, and 8 are independent chemical entities with different amino acid sequences, and (2) each of the nucleotide sequences of SEQ ID NOs: 1, 3, 5, and 7 are independent chemical entities with different nucleotide sequences.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

4. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian L. Fronda whose telephone number is (703)305-1252. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy, can be reached at (703)308-3804. The fax phone number for this Group is (703)308-0294. Any inquiry of a general nature or relating to the status of this application should be directed to the Group 1600 receptionist whose telephone number is (703)308-0196.

CLF